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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/235,686	01/22/1999	ANN XIAOAN LIU	AC06105	4330

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EXAMINER

JACKSON, MONIQUE R

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 01/07/2003

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s) N .

09/235,686

Examiner

Monique R Jackson

Applicant(s)

LIU ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-9, 11, 12, 16, 26-29, 33-35, 39, 45, 46 and 48-61 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-9, 11, 12, 16, 26-29, 33-35, 39, 45, 46 and 48-61 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed 10/29/02 has been entered. Claims 20-22, 40-44 and 47 have been canceled. Claims 1-9, 11-12, 16, 26-29, 33-35, 39, 45-46 and 48-61 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 26 recites the limitation "Synthetic resin film of claim 20, wherein the ceramic microspheres" in line 1, however Claim 20 has been cancelled and hence it is unclear what is meant to be encompassed by the claim limitation given that there is no antecedent basis for this limitation in the claim.
4. Claims 45 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 45 and 46 recite the limitation "The method of claim 40" in line 1, however Claim 40 has been cancelled and hence it is unclear what is meant to be encompassed by the claim limitation given that there is no antecedent basis for this limitation in the claims.
5. Claims 8, 45, 52 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons recited in paragraph 4 of the prior office action with regards to the term "at least about".

Claim Rejections - 35 USC § 102

6. Claims 1-4, 7, 9, 11-12, 27, 29, 33-35, 39, 48-49, 51, 53 and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Flint et al (USPN 5,486,402.) Flint et al teach a printing blanket comprising a fabric ply 12 spread coated, calendared, dipped or otherwise contacted upon its upper surface with a matrix material 20 such as thermosetting resins including self-curing elastomers, wherein the matrix material additionally contains a plurality of microspheres wherein the microspheres may be formed from materials such as thermoplastic resins and ceramics (Col. 5, lines 5-43.) The microspheres have a diameter between about 1-200 and preferably 50-130 microns (Col. 5, lines 47-49.) The microspheres are dispersed relatively uniformly throughout the matrix materials such that upon application of the matrix to the fabric ply, they become thoroughly embedded in its interstices (Col. 5, lines 48-52.) Flint et al teach that when applied, the microsphere loaded material will substantially impregnate and encapsulate the fabric substrate on its upper side (Col. 5, lines 52-54.) The microspheres are incorporated in the elastomeric material at a loading of about 4-90% of the solids content (Col. 5, lines 57-61.) Flint et al further teach that the impregnated fabric ply 12 is laminated to other substrates including additional fabric plies 32 and 34 which are formed similarly to impregnated ply 12 but wherein center ply 32 is impregnated on both sides (Col. 7, line 39-Col. 8, line 21.) Flint et al teach that one could use a variety of alternate substrate materials for the fabric plies including paper sheets (Col. 8, lines 1-10.) In terms of the process, Flint et al teach examples wherein the fabric plies are impregnated by giving them two passes of a filled matrix material on a knife over roll spreader and passed through a spreader oven at a speed and temperature sufficient to dry, but not cure, the latex, and then the resultant coated fabric plies were then passed once again through

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the spreader oven at a temperature sufficient to cure the latex (Example.) The impregnated plies were then laminated together, a face layer was calendared onto the subface and the completed composite panel was then cured (*hence with heat and pressure*; Example.)

Claim Rejections - 35 USC § 103

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flint et al. The teachings of Flint et al are discussed above. Though Flint et al teach that the microspheres may be made of thermoplastic material, Flint et al do not teach the microspheres are polyethylene powder as instantly claimed. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize any conventional thermoplastic microspheres commonly utilized in the art wherein polyethylene powder is an obvious species of thermoplastic microspheres utilized in the art.

8. Claims 6, 16 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flint et al. The teachings of Flint et al are discussed above. Though Flint et al teach that the matrix material may be a thermosetting resin, Flint et al do not teach the thermosetting resins as instantly claimed. However, it would have been obvious to one having ordinary skill in the art to utilize any conventional thermosetting resin commonly utilized in the art for impregnating fibrous substrates wherein melamine-formaldehyde, urea-formaldehyde, and phenol-formaldehyde are obvious species of thermosetting, impregnating resins in the art.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flint et al. The teachings of Flint et al are discussed above. Though Flint et al teach that the composite is formed by laminating the impregnated layers via conventional methods and teach an example utilizing pressure and temperature, Flint et al do not teach the temperature and pressure range as

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instantly claimed. However, one having ordinary skill in the art would have been motivated to utilize routine experimentation to determine the optimum temperature and pressure to produce the laminate based on the thermosetting resin utilized and desired end use.

10. Claims 55-58 and 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flint et al in view of *Microspheres: Microspheres Engineered for a Wide Choice of Unique Enhancements* by 3M and Zeelan Industries, Inc. (3M and Zeelan). The teachings of Flint et al are discussed above. Though Flint et al teach that the microspheres may be ceramic, Flint et al do not teach that the ceramic microspheres are alkali alumino silicate ceramic microspheres. However, it would have been obvious to one having ordinary skill in the art to utilize any conventional ceramic microspheres commonly utilized in the art wherein 3M and Zeelan teach an alkali alumino silicate ceramic microsphere which is commercially available as ZEEOSHERES W-610 and is a semi-transparent, white colored, fine particle size, high strength, high hardness ceramic microsphere and is useful in coatings and adhesives (Table.) Therefore, one having ordinary skill in the art at the time of the invention would have been motivated to utilize the commercially available alkali alumino silicate ceramic microspheres taught by 3M and Zeelan, an obvious species of ceramic microspheres, or any other commercially available ceramic microsphere known in the art for the invention taught by Flint et al. With regards to Claim 57, though Flint et al teach that the matrix material may be a thermosetting resin, Flint et al do not teach the thermosetting resins as instantly claimed. However, it would have been obvious to one having ordinary skill in the art to utilize any conventional thermosetting resin commonly utilized in the art for impregnating fibrous substrates wherein melamine-

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formaldehyde, urea-formaldehyde, and phenol-formaldehyde are obvious species of thermosetting, impregnating resins in the art.

Response to Arguments

11. Applicant's arguments filed 10/29/02 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 703-308-0428. The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Monique Jackson
Patent Examiner
Technology Center 1700
January 6, 2003